MEDICARE PAYMENT ADVISORY COMMISSION

PUBLIC MEETING

Ronald Reagan Building
International Trade Center
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COMMISSIONERS PRESENT:

GLENN M. HACKBARTH, Chair
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DAVID A. SMITH
MARY K. WAKEFIELD, Ph.D.
NICHOLAS J. WOLTER, M.D.

AGENDA ITEM:

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MR. HACKBARTH: We have a very distinguished expert panel to help us with our next topic. Karen, do you want to introduce the panelists and the topic?

MS. MILGATE: Sure. This morning we're discussing the possibility of the Medicare program using incentives, either financial or non-financial to encourage providers to improve care. Traditionally, Medicare has used quality assurance and quality improvement requirements to maintain and assure quality in care. However, as awareness of quality problems have increased, some suggest that Medicare program should do more to find ways to incent providers to improve care.

The Commission supported this concept in the January 2002 report on applying quality improvement standards with the recommendation that the Secretary should reward plans and providers for high quality performance and improvement.

This is not the only forum where the topic is being discussed. In an attempt to create true value-based purchasing, both private and public sector purchasers, including CMS, and individual providers and health systems are considering how incentives might work and experimenting with different designs. Some of these experiments were included in the case examples in your background material.

Here to provide us with a context for how to consider incentives in the Medicare program are three people whose personal dedication and tireless efforts have been instrumental in keeping the need to improve the health care delivery on our nation's radar screen. Not only have they helped articulate the problem, they've also led their organizations to design and implement solutions.

Our first speaker, Dr. Don Berwick, is a pediatrician by training and he leads the Institute for Health Care Improvement. The IHI holds conferences which are standing room only for thousands of people on specific ways to improve care delivery, and designs workshops that require teams of critical hospital personnel to commit significant amounts of time to reengineering their systems.

Dr. Berwick has contributed his knowledge and experience of provider systems to several key national advisory bodies including, from 1999 to 2001, he was the chair of the National Advisory Council for the Agency for Healthcare Research and Quality. He was on President Clinton's Advisory Commission on Consumer Protection and Quality in the Health Care Industry. And finally, he was on the Committee on Quality of Health Care in

America, the IOM committee which developed recommendations captured in the two most recent IOM reports on quality, To Err is Human, and Crossing the Quality Chasm. The article in your background material was from the latter, Crossing the Quality Chasm.

He's here to provide some context for the discussion and to help us understand why incentives are important.

Our second panelist, Dr. Brent James, is executive director of the Institute for Health Care Delivery Research at Intermountain Health Care in Salt Lake City, Utah. He's here to bring us the provider perspective on how financial incentives currently work in the system, and ways in which IHC has tried to align the provider and payer incentives to make quality improvements cost effective for all involved.

Because IHC has a physician, hospital and payer component, he's in the unique position of helping us think through how incentives each of the stakeholders in the system.

Dr. James has also contributed his time and energy to several national advisory groups, including the same IOM Committee on the Quality of Health Care in America, and he's also served on the Framework Board of the National Quality Forum.

Suzanne DelBanco has the distinction of being the first executive director of the Leapfrog Group. The Leapfrog Group represents over 100 Fortune 500 companies and other private and public purchasers. These purchasers provide benefits for 32 million Americans and spend approximately $52 billion on health care annually. The Leapfrog goal is to mobilize employer purchasing to initiate breakthrough improvements in the safety and overall value of health care for American consumers.

We've asked Suzanne to shed some light on the types of incentives purchasers are using, what has worked, what hasn't, and how these incentives might be used by another large purchaser, the Medicare program.

So with that, Don, do you want to start us off?

DR. BERWICK: Thanks a lot, Karen, and thank you for the opportunity to share some time and some thoughts with you. I also want to thank you for the work you do. I know how hard it is to be on this commission, and I know how dedicated you are to the work. It's really a privilege to get to have some input.

It's also intimidating because I'm way out of my areas of expertise here. I know a lot about improvement but not a lot about financing. So all I can do is tell you some of the things I think I'm seeing and perhaps assist in a conversation in which both you and my colleague panelists are more competent than I.

I run an organization, a non-profit organization that's trying to improve care worldwide, but focused largely in the U.S., and we continually run into the barrier of leadership will. The will in the health care industry for improving care is insufficient.

The motivation and spirit of the workforce is great. You can trust the people. They want to do better. But as a matter of strategy for the industry at the corporate and possibly even at the political level, the concept that improvement of care ought to be the core of the strategy is still not sufficiently

imbedded in the industry. I don't know why not. I try to understand it all the time. I think there are some skills barriers, there are some issues in technique. But there is a problem in alignment of the interest of organizations on the one hand with the improvement of care for people on the other. That's what I'm here to try to discuss with you a little bit.

I'm sure Brent will add to what I want to say at the outset, which is just to remind everybody how big the gaps are between what care could be, even given current knowledge, let alone advancing biomedical knowledge, compared to what care is. We have the pedigree of the Institute of Medicine reports, the President's commission, the National Cancer Policy Board and others who really have been very diligent across a wide array of initial political positions in reviewing literature, understanding the research base, and making what I think is an evidence-based comment on health care that it could be a lot better. Not marginally better, a lot better than it is given current knowledge, but that it isn't moving quickly enough in that direction.

The IOM outlined for us all six dimensions in which improvement could occur, and in each of those dimensions, safety, effectiveness, avoiding overuse and underuse of care, patient centeredness, timeliness, efficiency, and equity, the gaps are not small. They're large.

I brought along some data that gives us knowledge of the degree of gaps. I think probably your commission is very familiar with this stuff, but just in case let me briefly give you some examples. This is information from the Dartmouth Atlas of Jack Wennberg, who is our greatest student of variability in the use of resources in the country. Jack has 30 years of experience and sophisticated models.

But here, for example, is a -- he calls this a turnip diagram, showing for hospital service areas, using a model that allocates patients to hospitals based on the apparent catchment area, the probability that one of your beneficiaries, Medicare enrollees, gets admitted to a hospital with congestive heart failure in a particular year. We pick here '95-'96, but it hasn't changed in the data we have. Depending on where you are in the United States, if you're in Medicare, the probability that you'll be admitted to a hospital for congestive heart failure varies from about seven per 1,000 to, in some cases as high as 40 per 1,000. That's a 600 percent difference in the probability you will get into the hospital with that disease.

It is not credible to those of us who study the industry, nor does any data support the notion that you're seeing here some kind of latent variation in the underlying wild state; that they see different patients or different circumstances. This is variability in care. This is, for one reason or another, some places in the country are able to support people with congestive heart failure without putting them in a hospital, others unable to do that.

Here's the same data for where patients die. We know from the Robert Wood Johnson Foundation support study that people who die, the majority of people who die with a chronic illness don't

want to die in the hospital. And even those that want to die in the hospital do not often want to die intubated, or on IVs, or with invasive therapy. This is the proportion of people who die in Medicare in a particular year who die in an ICU compared to in the community. The range here is from about 6 percent of the decedents to well over 30 percent of decedents. There's about a 400 percent variation in the probability that one of your beneficiaries will die in an ICU, despite the fact that we know that the vast majority of them wish otherwise.

There's a national database on cystic fibrosis care. These are not Medicare beneficiaries. They're younger people. We know a lot about how to treat CF. There are 160 or so CF centers in the country. They voluntarily submit data to a centralized database run by the CF Foundation. By the way, under the condition that their identities not be revealed.

The national rate of poor nutrition in CF patients is about 25 percent, but it varies center to center in this country from 7 to 60 percent. The median length of stay for clean-outs is nine days, but it varies from two to 16. FEV1 is a measure of lung function, so a higher percent means more preservation of lung function. These numbers reflect a preservation of breathing in children, which nationally is a lung function level of 73 percent across all age groups. The varies from 70 to 104 percent in latency age kids, and 40 to 85 percent in young adults.

Somebody knows something on this curve that others don't know, and there is no national agenda for moving the knowledge about excellence from the best places to the places that need to get better. In fact there's a prohibition against moving that knowledge because the data here are locked in a box.

This is perhaps the most interesting diagram I'll bring you. This is work being done in my office by our senior fellow this year, Sir Brian Jarman. Brian is, I think, the leading general practitioner in the U.K. He has just stepped down as chair at St. Mary's in Imperial College. He's the author of the Jarman index, which is what the NHS uses to adjust compensation to postal code areas based on the deprivation of the population in those areas. The NHS makes sure that money goes where people are the sickest and the poorest.

Jarman has become very interested in large database management to study outcomes, and we've been here before, back in the days of Bill Roper and Glenn Hackbarth at HCFA. We tried as a nation to publish our mortality data. We did it for a while. We did well, and then lost our heart.

This is the same thing again now with a more sophisticated model, one that I've looked at very deeply. You're looking here at a pretty good signal to noise ratio with respect to the probability in an American hospital dies. This is just a random sample of 250 hospitals. You can't put 6,000 dots on a Powerpoint graph; it doesn't look too good.

But if you randomly sample 250 hospitals, using Jarman's adjustments now, this is all cause mortality in the hospital across 180 diagnoses adjusted for age, sex, race, payer, admission source, and type, and then for a set of about eight to 10 demographic variables in the community. It's about as

adjusted as you get.

If you look at the vertical axis, the way to read that is that 100 is the standardized mortality rate average in the United States. It's just empirically, if you take all the hospitals, you study their death rates adjusted by this method and you say, 100 is the national average. That's how it's defined. That's all that means. So no matter what your diagnosis is, adjusted now for the case mix, age, gender, and everything else about the patient being admitted to the hospital that we know, if you're admitted to a hospital that has an index of 100, you have the average chance of dying for an admitted patient.

Now you can see the dots as well as I can. There are hospitals in the country that are functioning stably -- we now have three years of MedPAR data as well the HCUP database here -- at about .4 to .5, and there are hospitals in this country that are at 1.6. Year to year these turn out to be quite stable. We have a 400 percent variation in this country in the probability that a patient admitted to a hospital will die in the hospital.

The horizontal axis is what you're paying them for that care. This is the standardized charge. This is all payer data because it's from HCUP, but if I showed the MedPAR data scatter plot you wouldn't know that I'd switched slides. It's the same. There is a 500 percent variation in the reimbursement per care, with a 400 percent variation in mortality, and there is no regression line at all. This is a cloud, not a line. So there is no discoverable relationship between the amount you -- we are paying for care overall and a very important index of the outcomes of that care.

The opportunity here is phenomenal, and the momentum is slow, and the will is insufficient, in my view. I became interested in this with Sheila Leatherman and we jointly approached the Commonwealth Fund and asked for a small grant, just for a nine-month project which ended last month. Joe Newhouse was helpful with this project and will probably tell me that I'm reporting it incorrectly, but you can correct me, Joe, please.

I want to describe the project and its findings very briefly and then turn things over to my other panelists. We set out to study the relationship between improvement and the bottom line. We chose to take the perspective of the so-called investing organization, which in almost all cases is a hospital or health plan. We developed seven cases. With the help of my friends on the Strategic Framework Board of Ken Kizer's organization, we selected a set of about 30 evidence-based improvements. None perfectly supported, but things where we know, if a place does this as opposed to the status quo, things are better for the patient.

We found organizations that either had implemented or were planning on implementing that improvement. We picked seven, just through networking. Then with a team of case writers from business schools and people from the organizations and our investigatory team, we went into those organizations. They opened their books, and we studied the clinical outcomes of the innovation and the bottom line effect as best the finance people

could trace it through to us, what was happening to them. Were they making money or losing money, basically.

Now I want to say that nobody in the whole team believes that that's the only reason we would do an improvement. There are many improvements one ought to do for ethical and moral reasons and others. But we had a very confined question here, which is when you put this improvement in place as the alternative to the status quo, does the organization make money or lose money?

The improvements we chose to look at were these: a diabetes management program, a low molecular weight heparin use for patients with deep vein thrombosis, lipid clinic management for hypercholesterolemia mainly with statin use. This is a nurse-run and pharmacist-run lipid clinic. Group visits as opposed to individual visits for patients with chronic illness, computerized physician order entry, an effective anti-smoking program in a health plan, a cardiovascular risk reduction program, and selected referral to high volume sites.

All but two of these are in health delivery systems. The last two are employers, the cardiovascular risk reduction program at General Motors, and selected referral to high volume cardiovascular surgery sites by General Electric.

This is a little more detail on the sites. The chronic care investigation of diabetes management was done at two sites, Health Partners in Minneapolis, and Independent Health in Buffalo. Independent Health is an IPA, Health Partners is a staff model HMO plus an IPA. We looked at the use of group visits at Luther Midelfort Clinic, which is a community hospital owned by Mayo Clinic in Eau Claire, Wisconsin.

We looked at smoking cessation and prevention at Group Health Cooperative of Puget Sound, probably the most famous cessation program in America, and the wellness programs at GM to reduce overall risk in selected employees.

We looked at General Electric's attempts to shift cardiac surgery to high volume locations. We looked at Henry Ford Health System's use of low molecular weight heparin in suitable patients. And we looked at plans at Children's Hospital of San Diego to put in CPOE.

Not all the cases worked all the way through, for various reasons which I won't go into. I'll show you some detail but let me first define what we meant by a business case. A business case was narrowly defined. We said a business case exists if the entity that invests in an intervention realizes a financial return on that investment within a reasonable timeframe with a reasonable rate of discount. It's just an ROI calculation. The return could be in dark green dollars, in reduction in losses, or in avoided costs.

The business case we said also exists if the investing entity believes that there's some other important, non-immediate financial effect on organizational function and sustainability in the longer run. So we put a little bit of a soft edge on the definition.

I'll give you some examples. Diabetes management at Health Partners, I will just editorialize and say, I have not seen a

better diabetes management program. The results are extraordinary in their staff model component. If you follow patients through that program and you look for cost recovery basically, care they don't have to give, at least in the capitated portion of the organization, because those patients don't get eye disease, renal disease, cardiovascular disease and other complications, it looks like they begin to break even in about year five just in their own operating terms.

The overall return on this program is about 10 to one if you use a human capital approach. That is, the extension of life and function in these patients according to the economic model used by the case writer is very good. But most of that money never shows up at Health Partners. It's returned to employers and the patients.

It took them about 10 years after they started that program to realize any financial return that we can find. It is interesting that at no point, even if the financial return wasn't there, that Health Partners considered not doing the program. They are absolutely committed to it, and we know from their senior leaders they simply regard it as doing work. They would no sooner stop that than they would stop doing appendectomies. It's just part of health care from their viewpoint.

Tobacco cessation at Group Health Cooperative has been going on for about 20 years. They currently have a program called Free and Clear that's a benchmark program for tobacco cessation. So far as we and they can tell, no money returns to Group Health because of that program. Too much time passes between the achievement of cessation of smoking and the outcomes that would be reflected even in a capitated system. And there's enough churning and turnover in membership that Group Health simply can't count on a particular patient having been in the Free and Clear program remaining in Group Health long enough that the reduction in cardiovascular risk and cancer is retrieved.

Like Health Partners, however, the senior leaders of Group Health do not regard cessation of the smoking cessation program as an option. They believe it is health care and again, they say they would no sooner stop that than they would stop appendectomies. Until we showed up, they had not done a financial calculation of the return on this program. They didn't regard it as a relevant question for their decision.

The lipid clinic at Henry Ford also has very good effects. When a person has high cholesterol, they should be on certain drugs to lower their cholesterol if it's high enough, and managing those drugs is tough. There are side effects, and compliance tends to be relatively poor. So Henry Ford started a pharmacist-led, nurse-staffed lipid clinic and enrolled patients who would come into that clinic. They only did it in half, in their health plan, not in their affiliated medical practices.

In that environment, the patients that comply -- the patients that are in the program get an 85 percent -- they hit the bar 85 percent of the time compared to the wild state of about 30 percent. So they have a tremendous improvement in lipid control in those patients. However, they have made a decision at the moment, they say, not to extend this program beyond the

capitated environment because it will be a definite money-loser for them. It's just they can't afford the investment. Statin drugs are expensive and in the fee-for-service part of their care it's cost added to add this program, despite their enthusiasm for what's going on.

So it effectively reduced lipid levels, but at high operating cost. Henry Ford is under tremendous financial pressure right now and the short term cost increases for doing this simply are beyond their reach.

One example of the workforce intervention, GM and the United Auto Workers have a terrific program called Life Steps which they do health risk assessment on all their employees, and then they take tier three, the highest risk tier, and they enroll them voluntarily in this Life Steps program. They're able to document considerable reduction in cardiovascular risk. They also have a cost model which shows them how much money is saved when a high risk individuals moves to tier two instead of tier three.

We could not get, nor could GM offer us, the cost structure of the intervention program, so in this particular case it's dropped off the rest of what I'm telling you; we don't know the cost to benefit ratio.

Let me give you the bottom line findings. We can go into detail in discussion. Most of the improvements I just showed you save money. They save money somewhere. In some cases, especially if you use a human capital calculation, they save a lot of money.

Almost none of the programs returned money to the innovating provider. The exceptions are few. The use of low molecular weight heparin in suitable patients returns money to the provider. However, at the study site for low molecular weight heparin there was a problem in that the low molecular weight heparin was being used off protocol. That is, it went to many patients who shouldn't have gotten it, and it didn't reach, by any means, all the patients that should have gotten it. So the failure to execute the introduction on protocol of low molecular weight heparin prevented that organization from harvesting back the economic benefit. But that was an implementation issue, not an economic barrier.

The United Auto Workers-GM system appears to be a high payoff system in terms of return to GM in worker days. But in almost no other cases that we could find could we find the money -- it was not a positive financial step for the organization to take care of these innovations.

The reasons were five. The returns were there but they came too late or in the wrong place. That is, outside the organization. This is less of a problem in the capitated environments by far, but it still is a problem for some of them given churning.

Second, any benefit they could have gotten from consumers seeking the better care was confounded by consumers not knowing that the care was better. So nobody with deep vein thrombosis knew that they could get low molecular weight heparin at that site but not across town. None of the diabetics seemed to be aware that Health Partners is probably the national leader in

diabetes management.

Third is, you're paying for defects. Many of the disjunctions occur because when you fail to treat, to prevent a disease, in most of the payment environments we studied, those patients end up going into the hospital and the hospital gets paid for it. So it's simple.

The fourth is administrative pricing. Joe and Karen Davis on our policy team added that. Let me interpret what I think it means. Let's take another innovation we didn't look at, e-mail care. I personally believe all patients in the United States should be able to access their physicians and nurses on e-mail. They do not now. I believe a lot of patients would be willing to pay for that a little bit. If you said, for $10 a month extra or $5, you can e-mail your doctor, I'm sure there would be a tremendous market for that. We have no way to get the market to tell us what it wants because the prices are set administratively. I think that's approximately what that means. Is that right, Joe?

DR. NEWHOUSE: Yes.

DR. BERWICK: Management challenges are like the low molecular weight problem. A lot of times the harvest doesn't go back to the organization, not because of an external problem but because of an internal management failure. The organization is simply unable to deploy the change thoroughly.

A very interesting finding is the difference between the view of a core and the view of an optional improvement. In my view, for MedPAC, this might be the most important finding. Organizations behave entirely differently when they believe that something is part of care, like an appendectomy is. That's what you see with Health Partners in diabetes, with Group Health in smoking cessation. They don't ask the question, should we do it? They only ask the question how to do it, because somewhere, somehow, in the value system of the organization, from its board, I don't know where, someone said, that's health care.

On the other hand, when you look at Henry Ford, which is a fabulous organization -- none of this is critical of them and I commend them for their transparency -- they feel they can decide not to have a lipid clinic for the fee-for-service group because it's not part of care. It's a frill, it's an optional thing. A nice thing to have, if we can afford it. Completely different behaviors.

I believe MedPAC controls to some extent the psychology of central care versus optional care, and I think it turns out to play out a lot in the behaviors of these organizations. There is no level playing field on this. The same type of intervention, smoking cessation, lipid clinic, or diabetes management is viewed by some organizations as in the core, and by others as optional. Therefore, you see very different kinds of behaviors in the system.

Another important finding I think is that if you separate business case return from economic benefit somewhere in society you quite reliably, with these interventions, find economic benefit somewhere. That's important. That's an important thing to notice.

So here are the impediments, failure to pay for quality while you pay for defects; the inability of consumers to perceive where something would be better; displacements of return and payoff in time and place; disconnections between consumers and payers, especially around wanted features like e-mail care; and uneven access to providers to relevant information are probably, I guess at managerial levels, problems in executing effective changes.

Policy options were considered by a group that Joe served on which is our policy team. It's a little more complicated. You have quite elaborate tables there which I'm not going to spend time on right now, but basically here are some options. That we should stop paying for defects. I don't know another way to say it. If you find a way to extend the boundaries of time and place for payment you will get more integrated care.

Now I will tell you that that leads logically, not politically, to capitated payment because the systems that have the widest boundaries in time and place are those which are getting paid for care of populations. It just is logic. If we can make consumers more aware of quality distinctions, it might be in the interest of some of these places.

Administrative pricing is a problem around features that are not in the core but you'd like to make attractive. So if there's something you want to define as not in the core but it should be available, then you've got to let a pricing system develop in which people can say, I want that and I'll pay for it. Right now they can't do that. So very carefully define the core, because by doing that you change behaviors fundamentally.

The tables in your handout are from the policy team in a long two-day meeting. We took stakeholders, patients, clinicians, and organizations and payers and we tried to say, given those five defects, what stuff could you do? Calling this evidence-based would be gilding -- I don't know what the right metaphor it. It's not evidence-based. This is opinions about what might work or might not.

On the patient side it tends to be information. People just don't know what's out there, and the distinctions that could be, and we are basically arguing for a much stronger national agenda for education of patients. I'm not a fan of cost shifting to patients. I'm not a fan of defined benefit. I think that's a big mistake nationally. But I am a fan of helping people understand what they get and what they don't get, and being more systematic as a country to educate people what they could have, and what they do get that they don't need.

At the clinical level there's a lot of implementation issues which are basically managerial problems. At the defect level, we think that guarantees ought to enter the system. There ought to be promises made by delivery systems and that is part of the business, to begin to understand what it is you promise and deliver.

Then at the government level -- I think what I'll do is not go over these as a list. You can read them now and through the panel and then we'll talk more about them. Let me stop there.

* DR. JAMES: Almost exactly two years ago, the Journal of the

American Medical Association published yet another study, part of really a genre of studies demonstrating the major academic medical centers in general get better medical outcomes than minor teaching hospitals, which in turn get better medical outcomes than community-based care delivery centers. This particular study examined acute myocardial infarct. The green bars represent major teaching hospitals, yellow bars minor teaching hospitals, red bars community centers. It's tracking mortality rates following acute myocardial infarct at 30 days, 60 days, 90 days, and two years after the precipitating event.

I should say in passing, if we instead examine the patients experience of care you get exactly the opposite trend, where the community hospitals routinely outperform the minor teaching hospitals, which in turn routinely outperform the major academic centers. It's arguably as, in some instances, even more important.

But in this case we're looking at medical outcomes. What made this study fairly unique was that the authors of the study tracked this difference in outcomes to its causes in care delivery. They tracked four main factors. The rapid use of aspirin -- the far left set of bars -- in the emergency department is a significant contributor to survival, but small and it did not account for a major part of the survival difference you saw in the last slide. Rapid reprofusion performance was similar across the organizations. It, similarly, did not contribute.

The effect that you really see on that last slide comes from the two middle sets of bars. Two classifications of medications that we know from good evidence, randomized controlled trials, are actively lifesaving. They tracked use of ACE inhibitors and beta blockers on discharge from the facility. They measured ideal patients. They attempted to establish patients who met indications but had no contraindications to the drugs. In fact about three-quarters of the effect comes from the third set of bars from the left, beta blockers, that class of medications. So there you see the difference.

The community hospitals managed to deliver those lifesaving drugs correctly 36.4 percent of the time, while the major academic centers did it correctly 48.8 percent of the time. That was sufficient, by and large, to account for the difference in survival that you see.

Of course, the reason I show the slide is to point out that big black gap above the 48.8 percent. Now let me get this straight, our best academic medical centers managed to do this correctly less than half the time? Is that what that's slide is showing us? That's exactly what it's showing us. In fact the Commission on Quality of Health Care in America and a number of other groups before, we found not just this particular instance but many others of similar performance in the American health care system.

At about the same timeframe a leader within our system, Dr. Donald Lepay, who heads our cardiovascular clinical program began to address that issue. He identified not just beta blockers and ACE inhibitors but three other medications with solid evidence,

the use of anti-platelet drugs, usually aspirin in patients with established ischemic heart disease; the use of statins to lower blood cholesterol in patients with established heart disease, secondary prevention; and the use of the drug warfarin to slow clotting and protect patients with chronic atrial fibrillation, from strokes usually.

He found a leverage point in the process of care. It turns out that when we discharge patients from our hospitals, the nurses complete a packet of forms. We call it our nursing discharge packet. And he just added a form to the discharge packet, a simple check sheet where the nurse could check off indications and contraindications for each of those five medications. Basic process, on discharge the nurse would complete the sheet. If the patient met indications but had no contraindications, the nurse would write the medication order on the discharge sheet.

Now in Utah, as in most of this country, nurses can't write medication orders. They're legally not empowered to do that. It still required the physician's oversight and signature. So it was still under direct full control of the attending physician, and in some instances they changed those orders. They'll choose a different medication, sometimes they know something that the nurse didn't know, they'll cross out a drug.

What this run chart shows though is the impact of that intervention. We drew a valid random sample of all appropriate patients, patients with heart disease, for six months before Don implemented his new approach. This is beta blockers specifically on the chart; 57 percent appropriate use. In the month following the intervention, it increased to 98 percent. At time point two, the second arrow, they rolled it out to our four largest hospitals, deployed the initial pilot. At time point three, we finally got smart enough to have the nurses take full control of it, which also improved care. It needs a time point four off the right-hand edge of the graph when we deployed it to all of our facilities.

After it had been in place for a year we conducted what's called a quasi-experiment. We took the hospitals where we deployed this intervention and compared them to other hospitals in Utah where it had not been used. So we had a prospective non-randomized controlled trial; fairly rigorous design. Comparing the year before to the year after in light of that controlled trial, our beta blocker use increased from 57 percent to 97 percent for a full year. The column to the far right gives the national statistics for the same year. ACE inhibitors, 63 to 95; statins, 75 percent to 91 percent; anti-platelet medications, mostly aspirin, 42 percent to 98 percent; use of warfarin from 10 percent to 92 percent.

In the quasi-experiment though we also tracked mortality. We used the Social Security death index to track every hospitalized or treated patient within our system long term. We used the state of Utah -- they maintain that locally -- and computer match our patients on a regular basis so we could track mortality rates. We discovered that in conjunction with that change in care, our one-year mortality rates for congestive heart

failure fell from 22.7 to 17.8 percent -- a very significant drop statistically. Significant clinically too. It represented about 330 lives per year, people who didn't die in 2000 who would have the year before.

For ischemic heart disease the drop was smaller. It was still significant. It's a larger group of patients at lower risk. Another 125 lives per year. Net savings in lives, about 450 per year. It appears that that change in mortality rate has persisted.

Of course, with proper outpatient management of heart disease, congestive heart failure, and ischemic heart disease using these proven medications, hospital readmission rates have fallen too by just under 900 hospital admissions per year. Rough estimate, you're looking at something on the order of $4 million a year, the net cost for hospitalization in difference between those two.

Another very quick example. This was work that was done by Dr. Kim Bateman. Several years ago he implemented a similar program for community-acquired pneumonia based on an evidence-based best practice guideline. He had to work very diligently on finding a form that would fit smoothly into the flow of practice in the clinic. But he discovered that.

Again, we did a quasi-experiment comparing the hospitals where Kim originally implemented, 10 small rurals in our system, to 12 adult hospitals where he did not implement. We saw that our proportion of patients suffering significant complications, as reflected in ICD-9 codes on the inpatient side of the equation, fell significantly. In direct conjunction with that, the proportion of patients dying in hospital, we thought that was a fair measure for this particular disease, fell significantly.

That first year in those 10 small rurals, that represented about 20 lives. Today, as this protocol has spread across our entire system we think it represents about 70 lives per year. Not too surprisingly, because we didn't have to pay to treat the complications, our best measure of cost of care fell by 12.2 percent. They're called relative resource units. They are stable in terms of medical price inflation over time. And it also balances cost structural differences across our hospitals. It's kind of like relative value units, but a nice stable measure. That represented about $1.2 million.

Now the reason I show you this one is because it was the first time in long experience with quality improvement that I actually measured not just cost of care but revenues of care. We had a long experience in some very sophisticated study designs demonstrating that Demming had it right: that as you improve the quality of outcomes of care, the costs drop. My problem was that the administrators working in this system, while convinced of those data, kept complaining that their budgets didn't get better. Initially, for the first couple of years I just whined back. I said, come on, you're the cost experts. Track them down.

But finally, we decided to help them out. It turns out that while our costs had fallen by $1.2 million, our revenues had fallen by $1.5 million in this class of patients. It was all to

do with DRGs. If the patient had a complication when admitted with pneumonia, it changed their DRG. Typically they went to DRG 475, long term ventilator support. At that point in time 475 was paying us about $16,400 per case and there was a nice little margin in there of about $600.

When we improved the care, it shifted them back into DRG 89, community-acquired pneumonia. DRG 89 we're being paid about $4,600 per case but our true cost of operations was about $5,200 per case for that particular set of cases. We not only passed along those savings, back to HCFA at the time, but about an additional $500,000 in what we regarded as IHC operational money, to deliver care to patients within our system.

Now it's again easy to make the case that quality does control cost. That theory has been very well developed in industrial settings, and experience shows that the same holds true in health care as well. The real problem is improvements in cost structure that damage your bottom line, your net operating income. I'm speaking of it the way that a care provider would see it, an individual physician in an office, a clinic, or a hospital or, in our case, a big, integrated delivery system with 22 hospitals and more than 150 outpatient care delivery locations, a charitable not-for-profit.

As we analyzed this more thoroughly we realized that there were three major types of activities that we could undertake to reduce the cost of health care. They're listed on the left of this slide. This is a simple version of the analysis that was actually performed by Mark Barrett in our finance department.

We thought of a unit of service as any single thing on a transaction bill, activity-based cost accounting bill: a single dose of a drug, a single lab test, a single imaging examination, or an hour of nursing services, those sorts of things. We could decrease the cost of a unit of care. Perhaps we would change our nursing skill mix so the cost of an hour of nursing care was cheaper.

Second activity that we might undertake, we could try to decrease the number of units per case. We could shorten the number of nursing hours to treat a case with a particular disease, a patient with a particular disease, shorten the length of stay, for example, or decrease the number of imaging exams that we performed, or the number of doses of a drug.

Finally, the third alternative, we could manage the care so well in an outpatient setting that they never required hospitalization. We could control their blood sugars so well that they never developed retinopathy or nephropathy, damage to their eyes or kidneys and required that level of treatment. So a fundamental quality improvement-based prevention strategy.

The thing that we hadn't appreciated is how those played out based upon how we were paid. We have four main payment mechanisms as general classes. The most common used in Utah is discounted fee-for-service. The numbers at the bottoms of those columns are the proportion of care delivery payments for our system. A little over 50 percent of all care delivery in Utah, discounted fee-for-service per case payment, that's mostly Medicare for us. There's a few other payers, commercial payers

who pay us that way. In Utah, we don't have any per diem payment at all.

The last column is the most interesting. I like to call it shared risk. The simplest version of it is capitation. If you look at the numbers on the bottom it turns out that about 85 percent of all our care delivery happened in discounted fee-for-service per-case payment. The elements of the list on the left that are controlled clinically, are accessible to actual improvements in care, are the bottom two. Administration pretty much entirely controls cost per unit. That's our real source of work.

So if I were to look at it from the clinical quality improvement standpoint, that's where IHC lives, in that red box. The arrows in the graph show the impact on our net income as we improved care with the aim of reducing cost, as the examples I just showed you in both cases.

So what happened to us when we improved cardiac medications and dropped our admission rate for patients with congestive heart failure and ischemic heart disease? We ended up with about 4,500 extra bed days, empty beds. We saved the variable costs associated with those cases but lost the fixed costs associated with them. It turns out that the cardiac discharge meds project was a net money loser for us. Once again, almost all of the savings flowed back to purchasers.

As we recognized that, we knew that to make our own business case internally that we had to align our contracting strategies so that we could harvest savings back. I apologize to Don. I know you hate it when I say that last statement there, Don. Clinical quality improvement really is a fast way to go broke if you don't have some mechanism in place to harvest savings back.

The reason I think that, we've discussed this before and talked about, you ought to be doing it anyway because it's part of your mission. But it makes it extremely difficult -- you get to the point where you're targeting improvements and you anticipate their cost impacts you have to say, can I afford it? Can I afford to treat my congestive heart failure patients appropriately? Can I afford to improve my pneumonia care? Because if you drive your organization out of business then you won't be delivering care to anyone. It forces you into a very difficult balancing act.

We eventually evolved three strategies. The first was to target your specific improvement projects. Fundamentally, every time you start a quality improvement team you look at that matrix, you carefully play out the projected cost savings through your payment mechanisms and say, should we do it? Does it hit our bottom line in a positive way or a negative way? It's very, very dissatisfying because you end up leaving so much on the table, so much potential on the table, to the point where, frankly, we don't use it to any great degree.

The second is you can use it in contract negotiations. This is really the work of Greg Poulson, our vice president for planning, who handles our commercial contracting. Greg basically said, look, if you can give me a better cost structure, I can turn that into advantage in the commercial marketplace through

contracting. What it forced us to do was sell on the basis of true price, not on the size of the discount. Most commercial sales in the United States are still based upon size of the discount. It's an easy number to understand.

Happily, some of our competition had pushed us down this road already. For our major competition in Utah, that particular group of hospitals needs to discount 40 percent to meet our base list price, as a not-for-profit. They were playing a little bit of mark it up to mark it down, to artificially inflate the size of the discount. So they had trained many of our commercial purchasers to think in terms of true price. It made it easier for us to go to them and say, last year we gave you a 7 percent discount from billed charges. This year we propose 5 percent. And you know what? You'll be ahead financially, because of the improvements we made in care.

To use that strategy it requires good data systems and long term trusting relationships is what it takes. Greg was quite effective in doing it for our commercial markets within the state.

The third strategy is by far the most attractive. It's really created by Dr. David Burton and it was based on the right-hand column in that graph where all of the arrows are green. As we discussed it, we decided that we didn't particularly want to move to full capitation. We actually thought we could do very well with full capitation. We really preferred a circumstance though where all the major players had some skin in the game, where we all benefited if we did it together.

Under capitation, we get all the benefits and the purchaser gets none. Under the other, discounted fee-for-service per case payment, it tended to be that the purchasers got all the benefit and we got none.

Under that particular strategy, the way that it worked, we had to reorganize actuarial analysis. It turns out that in most insurance companies actuarial analysis follows some standard accounting principles in terms of the categories they use. We had to reorganize it around families of tightly-related clinical processes of care that define groups of physicians and nurses who routinely work together. Now within out system we call those clinical programs. So it's defined conditions in terms of groups of physicians and nurses who routinely work together.

With some of our insurance partners we began to do that. It was a major retooling on their part to redo their actuarial analysis in that way.

The second thing we did for an identified population of patients, for the cardiovascular clinical program, for example, or women's and newborn, or primary care, we would project next year's expenses, what it should be actuarially.

We then entered into contracts where, as our teams improved care, if we could come in below the projected actuarial cost for that population and show that it related to improvements in care, that we would agree that we would split the cost savings three ways, where one-third of the savings went to the purchaser. They were just that much further ahead than they had any right to hope to be. One-third of the savings came to Intermountain Health

Care so we could afford to do this next year. And one-third went to our physician partners, who similarly were being impacted in their practices by those shifts in care.

We have used that model without our own health plan so far for three years on our large employer subsegment and our primary care clinical program. Currently, we're returning about $3,000 per physician per year, is their share of the savings.

The other key element, we continue to give the advantage, as long as the change is better than the rest of the marketplace. So we don't give the savings just for the first year that it occurred, but as long as that group of physicians and clinicians, nurses, technicians, manage to hold better than the marketplace, we continue to split the savings with them.

It's our favorite approach. You could imagine why I wanted to talk to you, the one group in our world, the largest group in our world in fact is not able to do those kind of innovative contracting strategies with us. So with Medicare at least we still have to think about things in that old, different way.

I think the lessons we learned are this, higher quality can reduce the cost of care. I think we've satisfied ourselves internally that that really is true. But we need to think creatively about ways that we can turn that improved care into benefit for all of the parties involved, for the patients, for the physicians, for the hospitals, for the purchasers, in order to achieve a solution that really would work for the whole American health care system.

* DR. DelBANCO: I'll keep my comments as brief as possible, sort of sail through it so we have some time for discussion. You'll see that there's really no accident that Leapfrog took the approach that it did because two of the people that we consulted about our approach are sitting to my right.

The Leapfrog group, I'll just briefly describe to you a little bit about us. We are now actually 117 purchasing organizations who have come together to use a two-pronged approach of trying to improve health care and improve the health care system. On the one hand, Leapfrog is about an organized effort on the part of purchasers to start buying right, to realign the incentives in the health care system so there is an environment in which providers can make the kind of innovations that we've just been hearing about.

On the other hand, it's about trying to engage and activate consumers to also not only become part of the solution by voting with their feet, in a sense, and reinforcing the superior performance of providers in the system, but also to enable them as individuals to make better decisions for themselves.

When our members join Leapfrog it's not a typical networking organization or trade association. What they're joining is a common commitment to a set of purchasing principles that emphasize that two-pronged strategy that I just described to you. All of our members agree to inform and educate their enrollees. They also agree to try to create different types of market reinforcement, whether public recognition, or different types of payment strategies, whether those payment strategies have to do with how they pay providers or how they create incentives for

their enrollees to make different choices in health care.

As a strategic decision, we are focused solely at this point on inpatient care and patient safety practices within the hospital setting. That has, in large part, to do with the fact of everything we learned from the Institute of Medicine report about what we know about what happens in hospitals, what we know about what interventions are successful.

We basically went to the leading patient safety gurus and quality improvement experts -- and again, two of them are sitting to my right -- to find out what would be the equivalent of anti-lock brakes, airbags, and seatbelts for the health care system, and came up with three, what we call our safety leaps, which is where we have started. Those are computerized physician order entry, having patient care in the intensive care unit managed or co-managed by doctors with special training in critical care known as intensivists, and evidence-based hospital referral.

The basic idea is referral for patients who have need of select high risk surgeries, or who have certain high risk neonatal conditions, to hospitals where their outcomes are likely to be better. In an ideal world we would be basing that on publicly reported, risk-adjusted outcomes data. But given that that is rarely available, we're using volume as a proxy for those referrals.

Based on these three leaps alone, some conservative estimates done for us by researchers at Dartmouth, led by John Burkmeier, who's also involved in the Dartmouth Atlas, predicted that if every non-rural hospital implemented these practices we would prevent more than half a million serious medication errors each year, save close to 60,000 lives, and $9.7 billion in annual health care expenditures. That's from a societal perspective, not just the purchaser perspective.

We have created quite a lot of traction in the last couple years. We're a visible movement. We're gaining members monthly. But we're still very much swimming upstream. When I say we, I'm not sure if that's the purchasers or the Leapfrog staff, but we're trying very hard to help purchasers, help our members figure out how to use their role to realign the incentives. What we're finding is that there are limited data. The kind of information we need to create those incentives are hard to find.

Employers are very unsure of what the return on investment will be. Given the economy right now, given the way health care costs are rising, it's very difficult for our members to go to the CFO of their corporation and say, I want to pay X number of hospitals more. That just doesn't pass the sniff test, as some people say. There's fear among our members of getting locked into higher payments. There is fear of employee backlash, certainly when it comes to using different kinds of incentives for enrollees to make different health care choices.

It's also, I think, increasingly understood by purchasers that it's very difficult to tinker with just one part of the health care system at a time, whether you're just focusing on our three leaps, or you're thinking about our three leaps in terms of how to get physicians to use CPOE. That's not enough because you've also got to think about how to encourage hospitals to

install it, and how to encourage consumers or patients to choose hospitals that have those systems in place, and you can go on and on.

There are growing efforts to buy right. Within the Leapfrog effort we have increasingly wide use of common questions that employers use -- I'm sure Jack Rowe can talk to you about this -- when approaching health plans that have to do with Leapfrog questions, Leapfrog efforts and trying to ensure health plan support of employers' efforts to implement Leapfrog. We now have some contract language that we've created that some of our members have put into contract this year, and we expect many of our members to put into contract next year, again that will support Leapfrog activities.

There are some examples of incentives in the system. Empire Blue Cross and Blue Shield, Xerox, IBM, Verizon, and Pepsi are now providing quarterly bonus payments to hospitals in the New York City area who have fully implemented computerized physician order entry and intensive care unit physician staffing. There are lots of other examples I won't walk you through. They're still very few and far between. This is by no means common behavior.

There's also, I think, some rapidly growing efforts to help consumers make more informed choices. There are many commercial systems out there now that both health plans and employers are contracting with, which provide whatever data are publicly available to consumers through various types of decision support tools to help people make more informed choices. The Leapfrog data are often incorporated into those tools. While you may not look at this immediately as incentives, I think by helping consumers make more informed choices there can be ramifications for providers in the system who are providing higher quality or higher value health care.

Leapfrog has many efforts underway, and one of the ones that I find most exciting right now is our incentives and rewards, what we call our lily pad. It's basically a work group. Unlike our other lily pads, this one is truly multi-stakeholder. We have hospital representatives, physicians, health plans, consumer experts and representatives, and purchasers sitting around a table to try to figure out how to create some alignment of the incentives when it comes to the three leaps.

We are using sort of a modified six sigma process and being coached by people from General Electric. Essentially what we're trying to do is identify, who are the stakeholders in any incentive and reward program? What are their needs? Meaning, not just what do they want, but what is absolutely fundamental to ensuring their participation in any kind of incentive or reward program? What can we brainstorm in terms of ideas for incentive and reward concepts that might make sense? What actually does make sense from an actuarial perspective? And what is within the purchaser's power to actually implement? Because many of the ideas that the group is most fond of are things that are very difficult for purchasers to do.

Working together we have come up with four main categories where we think there's some promise: creating incentives for both

installation of computerized physician order entry by hospitals and use by physicians, creating incentives for hospitals to enlist intensivists in the ICU, and creating incentives for consumers or patients to make different choices for where they seek care for select high risk surgery or neonatal conditions.

What's been interesting about what we've come up with is often the most popular ideas, through a rigorous ranking process we've used, are not financially oriented, and they're not within the power of the purchaser. They're things like providing family care for a patient who seeks to go out of town for a CABG surgery. They're things like trying to reform how malpractice works. These are all important ideas, but also very difficult for purchasers to actually implement.

The good news for Leapfrog at least is that we've just received a grant from the Agency for Healthcare Research and Quality to continue the work of this multi-stakeholder group. We are hoping to, with the actuarial assistance of Tarish, Perrin and others to flesh out the most highly ranked incentive and reward concepts, develop operational specifications for them, and plan for some pilot tests.

As many of you know, even though Leapfrog is a national effort, we have now 19 regional rollouts, specific geographic areas where we're trying to put implementation on a fast track. Our hope is to basically ask our regions to compete, to tell us why they think they're going to do the best job at implementing these pilot tests, and then to actually implement the same incentive or reward concept across, let's say, three markets and try and learn more about what works and what doesn't work.

That, I hope, gives you a sense where even some of the most sophisticated purchasers in the private sector are. Even those we think should know how to do this and be able to figure out how to do this are really struggling. We have a lot to learn, and we have a lot of people to convince that this is something that they need to do.

I think there are a lot of opportunities for Medicare, and I want to emphasize the fact that Medicare has been at the table with Leapfrog from the very beginning. We refer to what was then HCFA, now CMS, as a founding frog. We're also working with the U.S. Office of Personnel Management, with the Department of Defense, and many state agencies, and now Medicaid programs.

I think one no-brainer is consumer information. To the degree that we believe that if consumers have information that's meaningful to them, that they will use it, that that will change the market, that to me is something that can be done without much thought. Of course, there's a lot of debate over what information should be made publicly available, how it should be presented, what caveats need to be given, et cetera.

But that's an area where I think there's a lot of room for collaboration. In fact Tom Scully announced at our press conference last January when we announced the results of our hospital survey, that those data about where hospitals stand vis-a-vis implementation of the leaps will be available through the Medicare.gov site.

Public reporting, similar to consumer information, but

obviously public reporting is useful to more than just consumers, purchasers as well, health plans as well. Feedback to physicians for quality improvement. Again, although it may not look like an incentive, I think it can act as an incentive. Looking at ways for Medicare to join on to private sector public recognition programs, whether it's simply broadcasting that PBGH Blue Ribbon Awards this year went to X, Y and Z hospital, or whatever it is, I think that there could be opportunities for Medicare to spread the word, and obviously the reach is massive.

I would be very excited to see Medicare working with us regionally. For example, if we succeed in piloting some of the incentive concepts we want to try through demonstration projects, partnering together on that would be extremely powerful. Obviously, there's much bigger battles to fight in terms of trying to do what Brent was suggesting around really allowing more creativity in contracting and payments, but obviously that requires more than just a demonstration project.

So I'll just stop there and am happy to answer any questions.

MR. HACKBARTH: Thank you all.

DR. ROWE: Thank you. It's a pleasure. I want to thank all three of our Hall of Fame panelists here.

Don, I had just a couple thoughts about what you shared with us. The first has to do with the expense associated with some of these initiatives that you tracked. Our experience is that some of these initiatives may have differential effects on the acute care medical expenses and the disability-related expenses, and that oftentimes when people are trying to cost out the benefits and the costs of such initiatives they really focus on the acute care rather than the disability.

It's the cost of the entire health related experience that the employer in a self-insured situation deals with. You may pay a little more on the acute care episode side, but have much less disability cost, particularly related to not only people getting disability-related medical expenses but also being out of work, having to hire temporary personnel to replace them, et cetera. So I don't know what your methodology is, but a comprehensive view of that is, I think, the appropriate one.

The second is, there is one interesting project that I'd bring to your attention as your inventory grows and there is a project under every rock and behind every tree, I hope, in this area. But the Council for Affordable Quality Health Care, which is an organization of health plans, and the AHP, and other organizations, has done one on antibiotic use in patients with upper respiratory infections, which is an obvious case of overuse, and a case in which there are direct financial benefits and there may even be community benefits in terms of prevention of the emergence of resistant strains of microbes, et cetera. That was rather promising and something we could get you information on, just to add to the list, because it is a different species than some of the others that you have.

The e-mail, there are several health plans, including Aetna, that currently have e-mail projects underway, where we pay physicians X number of dollars for every e-mail interaction with

a patient. I think in a defined contribution mode where there's a medical savings account approach, the patients would be able to expend those resources for anything that one could define as a medical expense, that the patients would therefore have an opportunity to in fact buy that benefit if they wished, for those patients who really relied on it and found it useful. So you might think about that as e-mail going forward.

I think with respect to one issue that you touched on that I think was very important is the latency in the benefit. Every time an executive in a health plan tries to push one of these initiatives, the push back is that the heart attack we're preventing is going to occur in 20 years and the financial benefit of some other health plan, because we only have our members for an average of four years, five years, whatever it is. Although there is a subset of members that in fact we have for a very long period of time in some of these large national self-insured accounts.

I think that that is true to some extent, but I think it's often overemphasized, and I think that you can in fact fractionate the member population, and there's much more persistency than many people think. But that argument really goes away completely when you get to Medicare. Medicare is really the payer who, once they get people, has them forever. I think this is MedPAC here, and I think that we should not be concerned about that latency at all. In fact we should be able to encourage Medicare to step up to the plate with respect to this.

The last thing, and I'll quit because although I have questions of my other colleagues, I want to let the rest of the Commission participate here. I wanted to ask Nancy-Ann whether she thought that -- you know, every time we talked about lifestyle changes and prevention changes in Medicare we always ran up against a need for legislative changes with respect to what you could pay for and who you could pay, because you can only pay for diagnosis for treatment, and you can only pay physicians.

There are two areas that need to be changed, and wondered whether you thought, Nancy-Ann, based on your experience, that the kinds of initiatives that Don reviewed with respect to quality crossed a line and required that kind of legislative consideration, or whether you thought these were within the current boundaries? Thank you.

MS. DePARLE: I was thinking the same thing. One I know we really struggled with was smoking cessation. Mark may remember, we did announce a demonstration of that finally in 2000, but I don't think it's -- maybe the demonstration is going forward. It isn't a full-scale benefit at this point, is it?

DR. MILLER: No.

MS. DePARLE: And it's for that reason. We struggled with the lawyers over whether we could even do a demo of it.

DR. MILLER: [Off microphone] Generally, that's your mechanism, is a change in the law or a demonstration. If you're going to do a new benefit you generally have to change the law.

MR. MULLER: I too want to compliment the three individuals

and your organizations for how much you've pushed the quality agenda forward. I think you've also identified what I consider to be the central dilemma as to why quality hasn't improved, which is the mismatch between the clinical imperative and the financial imperatives.

I think Brent and Don both gave good examples of that. As Jack said, in Medicare, given that the population in a sense is with us forever once they become eligible, we have more opportunity to think about how to structure these together in a way that's much more difficult in the pre-65 population. Though I would point out even in M+C, even though there was an incentive at the health plan level in a sense to do it right, there wasn't at the level of the doctor and the hospital.

So my kind of sense of where I would urge you to keep going, urge the rest of us to keep going is how to keep working on how to get the financial and the clinical incentives to be working in the right direction. I think you very effectively point out how often, and probably in the majority of the cases, they don't work in the right direction. I think that's why Wennberg's data still is there after 30 years, and that's why we have all these difficulties because --

I know Don is now studying other health systems around the world and they are health systems where you can line up the financial and clinical incentives. We don't have that here. We're not going to have it here in any kind of major way, just because the way we've grown for 200 years and I don't think it's going to change very much in the foreseeable future.

But I think constant efforts at understanding that the clinical and the financial incentives have to move in the same direction is where we should be putting more and more work, because otherwise we'll just be preaching to the choir in terms of we have to improve quality, and yet there's all this kind of behavior that isn't moving consistently with that because there are, as I think both Don and Brent have said, there are clear financial advantages to having defects.

What we want to do is be thinking, I think both on the positive side of how to reward quality, and also in a sense on the negative side of how to penalize for having defects. I think they have to go in concert so that the wrong behaviors aren't rewarded through financial incentives.

So I would urge us as we move this agenda forward, to realize that these things, as they've so well demonstrated, do go in concert. I think the defeat of capitation in many ways set us back 10 years in terms of how to think about and how to do this. I think in part the capitation efforts were aligned correctly at the payer level, but they were still misaligned at the level of implementation, at the physician, nurse, the hospital level.

So I think we have to come back to that. I think that's a multi-year agenda for this commission. And I think we just, frankly, have to keep talking about dollars each time we talk about quality because you've so effectively shown they go hand in hand.

MR. HACKBARTH: Just to pick up on what Ralph said, I found the presentations simultaneously inspiring and daunting. Brent

at one point said the key to developing new relationships between the providers and payers are things like good data, long term relationships, flexibility, trust, none of which, I'm afraid, are hallmarks of the relationship between the Medicare program and providers. It's a huge sea change in that relationship to be trying to imagine it going in the direction you describe, yet I don't see that we have any alternative but to persist in our efforts.

DR. NEWHOUSE: I'll join the chorus in thanking you for very compelling and clear presentations and say that it was a real pleasure and a learning experience to work with Don on the case studies.

I wanted to try to focus us on the implications for Medicare payment since we are the Medicare Payment Advisory Commission. At the risk, or certainty really of oversimplifying what you said let me say what I took away from the three of your talks on that score, some of which Glenn said. From Don I took away payment system changes. From Brent I took away flexibility in contracting. And from Suzanne I took away consumer information.

Let me try to raise a couple of issues I see that seem to me to be very important here. One was hit strongly in the IOM Quality Chasm report, which is to do much of what you're talking about requires an organized system of care. Traditional Medicare is anything but an organized system of care. In fact our payment systems reinforce the separation among providers.

But what that means in this context, among other things, is that Medicare patients, or many of them, are going to be dealing with multiple providers, multiple physicians, hospitals, post-acute facilities. That means any outcome-based -- or not any, but many outcome-based measures are going to be affected by the actions of several providers. So the issue then becomes, how do I relate some kind of quality-based payment back to a specific provider? That seems to me to be an extraordinarily difficult problem.

It goes even to the consumer information point. For something like a Picker score where a patient reports their experience in a hospital, I think consumer information makes sense, although it's obviously a limited measure. I mean, one wouldn't want to make that the sole measure of picking a provider or a hospital. But when we get to outcome-based systems I think the problem gets much harder.

The second issue I wanted to raise, even within a provider, was the risk adjustment issue. It seems to me that most of the changes that you are talking about are really mostly process changes. For example, the cardiovascular drugs. And they're mostly inpatient based. That's reasonable. It seems to me that's the easiest place to monitor, and it's probably the most important place to monitor. But those are arguable statements.

Once one gets beyond process measures I think that are specific to a provider and moves on toward outcome measures, one gets increasingly into the risk adjustment issue. Even for process-based measures one has some of those problems since there are contraindications and so forth. It seems to me most of those risk adjustment measures remain to be developed, particularly for

people in the Medicare population that are going to have comorbidities, and that once they're developed we're going to have to have an auditing function that resembles the financial auditing function. So we'll have the equivalent of FASB, the SEC, and now the public oversight board if we're really serious about doing this.

That's a vision of a promised land, but when I stack that up with where are now with 85 percent or more of the patients in traditional Medicare it seems like we're a long ways from there. So any thoughts you have about how to deal with the kinds of problems you're talking about in traditional Medicare would be welcome.

MR. HACKBARTH: Any response?

DR. JAMES: One quick thought, Joe. I could have shown you similar examples from outpatient. It's just that I happened to choose inpatient. I think Don feels exactly the same experience in outpatient. We have substantially improved our diabetes care, for example. Again, a large contingent of Medicare patients in that group. It turns out to increase the cost of medications, more expensive, tighter control. It increases the intensity of service in a visit, for which we're often not completely compensated.

In the long haul, it takes about three to five years to start to see it in your data, but your hospitalization rates drop fairly substantially, so you lose income on that side. But diabetes turns out to be a beautiful model of the same things happen, where there are major savings. Demmer estimated $2,000 per patient per year for tight control actually, but where the savings go back to the purchasers.

Beeson said something famous in the New England Journal of Medicine some years ago. He said, the only thing that can change care happens at the front line with physicians and nurses, to paraphrase. The concept of aligning incentives so that the financial incentives line up with your professional incentives is such a powerful concept. Otherwise, you force your physicians, your hospitals, your systems into this crazy trade-off where to do what's good for the patient they have to risk death themselves.

That idea of aligning incentives is such a powerful idea. I realize that it's hard, but I think we have to find some creative thought to move beyond that.

DR. BERWICK: With respect to both Jack and Joe's comments, there's a way to think about it that is just so visible to me after the Chasm committee and the President's commission and this stuff. It's well known to you and I'm probably oversimplifying, but we built the system you run from Hill-Burton days and then the Medicare days of the '60s. The thought there was that what people really need was, when they get sick, they need to be healed and made well and return them to the workforce. So it was like sickness came in these rather short time intervals, and all the payment is about short term.

But that's not the burden. The burden is the 70 percent chronic illness. The remedies involve rather long time trajectories. I guess organized system of care is a structural

way to think about it. But the actual underlying thing here is that the need we're trying to meet has time constants that have nothing to do with the original time constants implied in the way we pay. That's why capitated payment looks so good because it just lengthens everybody's time horizon.

So the basic theme here is, of course, organize the care. But the financial image is the time constant behind the financial payment hasn't anything to do with the burden we're tyring to meet, and it doesn't right now.

DR. NEWHOUSE: But, Don, how can you broaden the unit of payment without giving, in effect, a capitated payment to some actor in the system?

DR. BERWICK: I see no way, Joe. There might be a solution if we could think about paying for populations to be cared for. Now what I'm showing you here is, these are results from the Health Resources and Service Administration which is an absolute diamond in the rough right now. The community health centers of the country are working on care of chronic illness very hard, with thrilling results. This is improving diabetes control in 30,000 patients in a registry in HRSA with about a 20 percent reduction in cardiovascular risk in about 12 months, in 30,000 and about 300 health centers.

It's not because they're an integrated system. It's because they have a population sense, and they think of caring for groups in a way that the fee-for-service does.

The other place that Ralph and I were talking about in the U.K. where I think it might be worth your looking harder at the U.K. right now for a while and seeing what's going on there. They're working very hard on a population basis again. This is improving access in 1,200 primary care sites in the U.K. They have a single budget and a population that they feel fiduciaries of.

Now Jack said exactly right, that's who you are. That's who Medicare is. You have a single budget and a population of people you care for. Now can you get that thinking, which is yours, reflected in the design of a system which has the same way of thinking? Right now there's a voltage drop from what you are to what the system is trying to be.

DR. DelBANCO: I just want to answer part of your question which is about the risk adjustment and how are we ever going to move forward. I just can tell you that the private sector is going to move forward. We're working with the Joint Commission, for example, right now on a 18-month project to develop a national risk adjustment methodology and reporting program for ICU outcomes. Our plan is that 18 months from now we will still ask about staffing, but we'll emphasize the outcomes.

We're looking for some of the high risk surgeries we're focusing on, just looking at the volumes right now, on existing programs that -- for example, New York State's program on CABG outcomes, and whether or not Leapfrog wants to endorse that on a national basis and allow hospitals to report in to a national database and benchmark against each other.

We've already faced a lot of challenges from the hospitals about what we're doing, but what's been interesting is that the

tenor of the discussion -- and this may be temporary, but the tenor of the discussion has changed. In the beginning, of course it was, please go away. Then it was, we really aren't very confident about volume. And then it was, why can't we just report how good we are?

So we're going to try and take advantage of that situation right now and see where we can go with it.

MR. DURENBERGER: Let me begin by just thanking Don and Brent and John Wennberg and a couple people at this table for being my mentors over the better part of 30 years now that I've been involved in this field. It's just a testimony this morning to the fact that it pays to listen, and I still do and I learn all the time.

There's an old saying someplace that says, when the pupils are ready, the teachers appear. I give that to you just by way of an encouragement. You've all been at this for a long time as have many of the people here, but my sense is that the pupils are getting ready. I gave Alan Nelson this morning an e-mail copy of Dr. William Mayo's speech to the Rush Medical College commencement in 1910 in which he's talking to doctors about, we're not just in the profession of healing, but the art of preventing disease. The time is ripe for action in the medical profession. The people are ready. We must furnish leadership. Way back in 1910.

So part of the question I guess I'd like to ask you is sort of a judgment question. That is, if you look on the face of it, the medical profession is not ready today, but if you look behind not just the people at the table but a lot of people we know, the sense is that if you get past all the disgruntled dissatisfaction there is a profession that's ready to change and waiting to take leadership.

So I have really a two-part question. One is, given the testimony here today -- and this question goes to the national level role and the local level role. My sense is that, yes, there are things that we need to do at the national level, setting some standards, creating measures and things like that. But that the only way we're going to achieve the goals that you've set out for us in the practical course you've suggested we take is that we start local. If we use the Brent James examples of Utah, or if we come to LaCrosse, Wisconsin or some other place like that, where you have the intersection of the providers whose behavior you'd like to change and the payers whose incentives you'd like to realign. Then also, obviously, the consumers and so forth as well.

Could you give us some judgment about where do you start with this effort, or do we start it simultaneously and just make it clear that there ought to be two specific questions?

And I've got a second question that you don't have to answer because I've already asked too much. But I'm apprehensive about this consumer-driven health care thing that all the employers, many employers are buying up very quickly, and getting in the way of however you answer the first question that I'm asking you.

DR. BERWICK: Let me take a quick shot. A model I've come to use comes from my colleague Tom Nolan. It says, to change a

large industry it's going to take will, ideas, and execution. I think the will is insufficient if it's only local. Medicare, CMS, MedPAC, you're in a leadership position and I think it would be great if you would help build will. I personally strongly recommend that Medicare begin again to publish hospital-specific mortality data.

I think we need a national commitment, a strong commitment. I think the national quality report that's going to come out of AHRQ is an opportunity for you to receive it, to say, there's some findings here and we set an agenda for improvement of the following type for the next two years, and we expect results and we want reports. That kind of will-building will be very helpful.

Ideas also are insufficient if only local. I had an interesting experience last week. I made some comments about e-mail care. I think it's a very good thing for our country to be going toward. I did it in a speech and then went to a luncheon at which I was slammed by a group of people in the room who said it's impossible. Doctors don't know how to use it. Patients will overwhelm them. It's irresponsible, it's illegal, and on and on. That evening I went to a dinner party with Geisinger Clinic, which now has 2,700 patients in a big pilot study on e-mail and it's going just fine.

So we have to think more globally about knowledge and help the local people who doubt, find the champions who may not be anywhere near their city who have something to offer them. I think that spread of ideas is an untapped reservoir, it's an untapped resource.

I have often thought Medicare should take a leadership role in developing a health care extension service that looks like the agriculture extension service. Where I don't think if you're a 30-bed rural hospital deep in the heartland, you can get help. Someone who knows you and understands you will come there to you, helping you as a matter of the commonwealth.

Execution is always local. What you say is true, there are doctors and nurses and managers all over this country ready to go for it and really make the kind of gains they're able to at Intermountain Health Care. The values are there with sufficient will and a source of ideas, I really think.

DR. JAMES: Two comments. Two ideas, I guess. I live pretty much at the front line most times, down with teams, physicians, nurses, caring for real patients, figuring out how we're going to put that together. I honestly believe that there are two major changes happening that are going to fundamentally change the nature of health care, and I think that they're well past the tipping point, both of them.

The first is the nature of medical practice is changing fundamentally. How we see ourselves as physicians, as nurses, as therapists, fundamentally changing. It has to do with variation in care, complexity, clinical uncertainty, an exponential explosion in new medical knowledge and how we deal with it. We're fundamentally shifting from the concept of single physician, single patient, that independent, personally autonomous model into one where you work as part of a group, a

professional group, around evidence-based best practice, customized to individual patient needs.

I've been watching that for the last, at least seven years, develop. It just keeps gaining power. It's creating a group of physicians particularly, it's easiest to see, who get it and who like it. They like what it does for their patients. They like what it does for them personally. It's also creating a group of physicians who absolutely hate it. Who see it as the loss of personal power, personal autonomy, of their income.

I think that's true any time you have a major change, a sea change happening underneath. But I think it's going to continue, and as it does the organization of care, the function of our system as a true system is going to fundamentally change. No question about it, it just continue to advance.

The thing that's happening in parallel with that and may actually be an effect of it is the data systems are starting to improve in significant ways. It's not just a matter of buying a bigger, faster PC. It's how you structure the information underneath so that you can be clinically productive with those data systems at the front line. That's the key issue. There has been a fundamental change sometime in the last five years with that.

As you see those big systems start to roll out, as you see that proof of concept happen not just at one organization but among many, as you see the system start to restructure it's going to require changes at this level too. There's no question about it. It's just a matter of aligning those sorts of changes, understanding them, aligning them, and then appropriately driving them ahead.

I honestly believe that even if we don't accomplish anything here, it will continue to move ahead. It just won't move as fast, it won't move as well, and we'll eventually have to address those problems, because it is fundamentally changing underneath.

DR. NELSON: Brent, as part of disclosure, I'm on the board of Intermountain Health Care. I understand, therefore, that the innovations that you are describing are across the entire patient population. That is, Medicare patients are benefiting from the quality improvement efforts, it's just that Medicare isn't paying its fair share. It's being subsidized by your private sector contract.

I think for us the issue is how to fulfill Medicare's responsibility to the beneficiaries to be a leader in this, not just a beneficiary.

MS. RAPHAEL: Just building on what Joe said, I'm trying to think about this from the point of view of implications for the Medicare program. I'm very interested in two things, the whole notion of how you extend time and place. But beyond that, I think the key issue is capitation in and of itself is not enough. We know that. We've had capitated payment systems and they have not transformed this landscape.

So I guess one of the questions I have is, how do we build a bridge between the capitated payment system to some entity and what happens on the front line? I've heard one thing which is shared savings in some way. But I was wondering if there were

any other models that you have seen that would enable us to build a bridge.

The other thing that I think does help is something you just said, Brent, which is trying to think about information systems from how they can be used as tools for people on the front line, rather than these vast databanks at an administrative level that really can't be used. I know on my front line, we build systems where someone has to go through 12 systems to get what they need, rather than thinking about how all of this plays out every day.

But I'd just be interested in anything that you have seen that could help us to make this connection.

DR. JAMES: Currently the shared benefits model is our favorite. Probably the next one back is just plain old capitation. We regularly discuss moving into a capitated Medicare environment again. I guess there are some of us within the system who believe it's just a matter of time, unless we're able to work something else out.

The key to making capitation work is good data systems, just in passing. If you have good data systems, you can price it right and you can manage it after you've entered the contract. I think that's the reason that so many capitated models have failed is because those people haven't had their finger on the pulse well enough to actually meet the obligations that they've undertaken in those contracts.

That said, I guess what I'm really asking for, I think that there are a series of potentially creative solutions. Capitate us on the basis of specific chronic diseases, for example. That would be interesting to talk about. That's what Don is really saying in some sense, relative to payment.

What I would really like to see is enough flexibility that we could sit down together and work out some innovative approaches. That's what I think would be extremely useful. And to experiment a bit and say, what really does make sense in this new developing world that we have coming. I don't want to commit to things too strongly too soon, because I suspect there's a lot of innovative thought waiting to happen as this thing starts to settle out.

So I guess that's what I was really trying to say, to make it more clear, is that ability to experiment a little bit, to understand back and forth. The difference between sitting down with Medicare and sitting down with one of our large purchasers is actually that we never sit down with Medicare, come to think of it. You can't have that conversation. It's a given at the outset, isn't it? It's pretty clear it's not working. It's just not clear how you get to something that does work.

DR. BERWICK: The history here is relevant, and understanding the history is important. Capitation didn't fail. What failed was, we lost definition of terms. We lost an ability to have a logical discourse about what we were paying for by developing the concept of managed care, broadening what it means, and then linking it to capitation at a very high tier.

I'll tell you what works empirically. Whether we can get there financially, I don't know. But payment for care of populations so that we can broaden time and place, given to

systems of care which are truly integrated in the way they view the care of those populations. They can move resources between home care, and the hospital, and the ambulatory setting. Staff and group model HMOs were our best -- still remain our best shot at that.

But if I could wave a wand over the country and change the way you're paying, I would buy care for populations through capitated payment, adjusted for risk, and give the money to staff and group model organized practices. That's the straight shot. How you can from the disaggregated system we have now to that, I have no idea, but that's what works.

MR. SMITH: I want to join my colleagues, this has been both daunting and challenging in ways that, unfortunately we don't spend enough time at. But one of the reasons we don't, Don, is that in a non-capitated system 85 percent of our beneficiaries are your deficits. When you talked about not paying for deficits, another way to think about that is those are the folks who we are primarily responsible a payment system that provides them with access to high quality health care.

I say that not to make a rhetorical point, but in terms of mission, figuring out how you address the longer term questions of proper alignment of incentives and players while you manage a system which clearly does not meet those tests, is a very difficult task. It takes us, it seems to me, to some of the challenges that Brent raises, which is are there a half a dozen, or one or two, serious, innovative experiments that should we be insisting, and you insisting that Medicare pay for a demonstration providing chronic care managed care to non-Medicare beneficiaries?

The other side of Jack's notion that we're the only institution where you can actually reap the benefits of that is we reap the benefits potentially of decent care for people who are our members, because they're all going to be. So is there a way to think about, Brent, providing that kind of chronic disease management to non-members which Medicare should be encouraged to pay for as a way of beginning to get incentives lined up? Are there other things of that kind that we ought to be thinking about, because we're not.

We're not going to remake this system in a flash. We're still going to be figuring out how to provide the overwhelming bulk of Medicare's resources to non-capitated beneficiaries. But what can we do that opens up some space in the way, Brent, that you were talking about that gets Medicare to the table? You're not going to get them to the table in a redesign of the system, but you may be able to get them to the table in a conversation about demonstration projects which have some point in that direction.

DR. JAMES: I don't know if I'm really prepared to talk about it fully. We've been hesitant to enter into demonstration projects in the current structure of demonstration projects because they tend to be too short term, and they're fairly severely constrained in terms of how we can try new things. We really felt like we needed some other more flexible approach. That's why sometimes we sit down and talk with Jack Wennberg

about some of his ideas about how we might make that happen.

It's interesting, you realize that we just think about caring for patients really. When we're delivering the care we don't really distinguish between Medicare and the rest of our patients. Many of the diseases we treat, almost all of them, with some exceptions -- we still don't have a large pregnancy, labor, and delivery service under Medicare, for example. Most of them do cut across that age boundary though, so you think of it as a single process of care.

Interestingly, quality improvement is inherently a preventive strategy, just in passing. It's inherently, in the way that it functions, a preventive strategy. Your whole intent is to move upstream, to manage a process of care, the only part you can manage in order to change things downstream, and every aspect of it's preventive, inherently. I suspect that we probably will need some mechanisms of creating laboratories for innovation on these things. I guess that's what I'm really believing in this.

DR. BERWICK: It would be fun to try to spec out the demonstration you're talking about. You'd have to decide how much impact on policy it could have. But just listening to you I started thinking, absent of staff or group model, what would you want in it? I think you'd want results orientation, so that the success in the demonstration has to be defined in terms of patients better off. There's no other measure of success that would count.

It would have to have transparency involved. No black boxes about how we're doing. It would have to have a population payment thought in it. It would have to say, what we're really doing is buying care for a group of people. Nothing else short of that will work.

It would have to have -- I think it should use the Chasm report as a framework. I think you've got a framework for the results that you want and some of the changes that would make a difference in terms of care at the microsystem level.

And my own vote is I think it would be total cost neutral. I do firmly believe that there's enough money in the system, and I don't really in my heart think Medicare has to pay more total to get better care for this population. So I would not argue for you to be saying, here's a whole lot more money as part of that demonstration. I'd say, here's a whole lot more flexibility in how you use the money you get now.

I think you could probably pull it off. Whether the system could respond outside classical integrated systems, I don't know, but I'll bet it could. I think it might be geographic. Go to the city of Seattle or a catchment area and see -- challenge it. Interesting.

MR. HACKBARTH: We are well over time. I appreciate your help with this. I appreciate the patience of commissioners and the audience. I have two people that I'd like to give a chance to say something, Nancy-Ann and Sheila, and they'll have the final words.

MS. DePARLE: I'll be very quick then. I just want to encourage, Brent, you to sit down with CMS and talk to them about

your ideas because I actually agree with what everyone said about the difficulty of working within Medicare structure and the administered pricing systems, but I actually think the agency is very open to sitting down and working on demonstrations. Certainly the ones we've seen and talked about here have not exactly been short term. They may not be as long term as what you would like, but I think there's a lot of room to work together on that as well. There are questions of resources to work on demonstrations, but I think when I was there we were very open to that.

I also wondered whether Intermountain ever considered the provider-sponsored organization that was made available in the M+C program. That may be a longer conversation, but when I heard you describing it -- and I remember thinking this before -- you were the type of system that we thought might come in and say, we want to manage care for this population, and it didn't happen.

DR. JAMES: There's a long story behind that.

MS. BURKE: This is a longer conversation as well, but building on Nancy-Ann's point, I continue to struggle to figure out where we could best intervene to begin to break the cycle where essentially the capitation payment is based on essentially, fundamentally on a broken system in terms of the basis of the cost that we pay, that reinforce behaviors that encourage the cost to build so that there's never a benefit to you for having done things correctly. As long as the system is built that way, and there is a question as to whether it is -- if we only pay for things to be done the right way, how quickly you get to that when in fact a large percentage of our population are in an environment where it's not being done the right way.

So where we intervene in that process, whether it's at the price, or whether it's at the expectation of what we will pay for, limiting the things we pay for, is a challenge to the fundamentals of how we built that payment system. So it's trying to figure out where you intervene in that.

The other thing I continue to struggle with, and it reflected a little bit here today, is that we tend to think of this largely as an institutional issue. We think of it in the context of how we pay hospitals, as the driver. We tend not to then leap to the issue of how we deal with the doc, and how we incentivize the doc as well as the institutional provider, and how you link those two. We are so silo-based in the sense of how we establish payment systems, and how we link the two, that I think it puts a particular challenge on.

As Nancy-Ann suggested, a conversation with CMS about the flexibility, but our history on the demonstration side in Medicare is not very good. They do tend to be short. We tend to have expectations. The concept of cost neutral is a foreign one to us. We demand it but rarely do we achieve it. Or if we do it's for all the wrong reasons and all the wrong results. So I think a conversation with them makes sense, but I think there's a much more fundamental issue here about how we build payment and how we create the incentives, Don, that you've talked about for so long, and create it both institutionally and on the individual provider side.

I just can't quite grasp, for our purposes, the Commission's, where we can best intervene at this point in time in terms of beginning to change the system and how we build the payments.

MR. HACKBARTH: Thank you very much. I'm not sure exactly where we go from here. This is very, very difficult stuff but I think it goes right to the heart of what needs to be accomplished for the Medicare program and the health care system at large. So as frustrating as it may be, I think we need to come back to it over and over again, and keep looking for handles on the problem.

Three things that I would like to pursue as the Commission, talk about further. One is a role for the Medicare program in reinforcing the education of policymakers, the public at large about these issues, these problems.

Second is that a possible handle on this may be in the disease management area. I think Don's comment about the problem not being the failure of capitation but really connecting the financing method with changes in the delivery of care I think is exactly right. Maybe if we can go down to a smaller unit, a clinically meaningful unit, we have a better chance at that.

Then third, there may be opportunities for the Medicare program to piggyback on private sector efforts and local efforts that already has some momentum behind them. So we will keep searching.

Thank you very much for your invaluable presentations.